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ABSTRACT

The controversy about the causal ordering of leader behaviors and unit performance is reviewed. The analysis indicates that neither the behavior-performance nor the performance-behavior proponents have provided convincing evidence. A longitudinal study of the development of these interrelationships from the initial stages is described. The results suggest that group members perceive a behavior-performance ordering but leaders perceive a performance-behavior relationship. These results imply that further research should focus upon both parties to the relationship in the earliest phases of development. Since both parties appear to make decisions with limited information, an attributional perspective may be needed. (Author)

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Leader behavior "causes" performance:
A review and longitudinal study

For a period of more than thirty years empirical research in leadership had been extremely predictable. A vast majority of studies over this period followed a pattern of interpreting static, zero-order correlations between leader behavior dimensions and outcome variables. A lack of consistency in findings as well as a weakness in explanatory power of observed relationships, however, seems to have kindled a spirit to seek out alternatives to the standard interpretations. A classic example of this reawakened spirit of inquiry can be found in the recent controversy over the long-accepted assumption of leader behavior causing unit or individual performance. The purpose of this paper is to briefly review both positions taken in this controversy, analyze the supporting evidence, and present evidence from a longitudinal study toward the resolution of the controversy.

The recent review by Stogdill (1974) indicates the nature of the underlying problem. In summarizing studies which used the traditional Ohio State leadership dimensions with performance as an outcome, he was unable to find consistent patterns of results. For 19 studies using leader consideration, 42% reported positive relationships with performance, 16% reported negative relationships, and in the remaining 42% no reliable relationships were found. The results of leader Initiating Structure with performance were somewhat more consistent. Beside inconsistencies, the static

correlational nature of the studies would not allow an unambiguous causal interpretation.

The traditional interpretation of the relationship of leader behavior leading to performance seems not only intuitively plausible, but also organizationally meaningful. The usual temporal ordering of these two variables would seem to favor this interpretation, and the argument suggests considerably larger capacity for control than the reverse argument. Several studies have been supportive of leader behavior as the precipitating factor. Jackson (1953), for example, found in a longitudinal study that when high rated foremen and low rated foremen exchanged work groups, the leadership style rating, after four months, remained stable but the performance characteristics of the new groups varied considerably. Rosen (1969, 1970), in another longitudinal study found that exchanged foremen, who were accepted by new group members, showed increases in performance three and four months after the exchange. Similarly, Dawson, Meese, and Phillips (1972) in a classroom experiment, demonstrated that student performance was related to the behavior of their instructor. Unlike previous studies, Dawson, et. al., did not allow the leader behavior to be influenced by performance. Other longitudinal studies (Hand and Slocum, 1972; and Downey, Sheridan, and Slocum, 1976), also provide at least some support to the overall proposition that leader behavior has an impact on member performance. Further, the Jackson (1953), Rosen (1969, 1970), and Downey et. al, (1976) studies suggest that leader behaviors remain rather stable and are not strongly influenced by performance characteristics of members.

The performance causes behavior perspective seems to rely upon two types of arguments. First, several studies have attacked the issue directly. The most widely quoted of these studies are by Lowin and Craig (1968) and Farris and Lim (1969). Lowin and Craig (1968) in an experiment with naive supervisors and confederated subordinates, reported that low performance led to more control and structuring by supervisors while high performance was related to less of these behaviors. The design prevents any analyses of the performance impacts since it was not possible for leader behaviors to influence the pre-programmed performance of the subordinates. Further, subjects were involved in only one performance condition. The Farris and Lim (1969) study is interesting because performance never occurs. Subjects are simply informed that they have to change work methods of high or low performing units. Mysteriously, the performance of these work units became the independent variable in analyzing data generated by Ss. After 20 minutes of discussing changes in methods, the Ss rated the behaviors of their leaders along with other perceptions. The authors conclude that high past performance led to leader support, goal emphasis, and interaction facilitation. Although other studies have demonstrated similar relationships (see Haythorn, Crouch, Haefner, Longham and Carter, 1956; and Crowe, Bochner and Clark, 1972) only one longitudinal study examined performance as the precipitating factors (Greene, 1975). The results of his study are difficult to interpret. None of the zero-order static correlations between Consideration, Structuring, and Performance were

significant, yet, all cross-lagged and dynamic correlations among these variables were found to be significant, indicating that performance led to leader behaviors.

The second type of study argues for the reversed relationship from a slightly different perspective. These studies posit that subordinates infer leader behavior and other situational characteristics from performance information. This attribution hypothesis has been suggested by Staw (1975) and Mitchell, Larson and Green (1977). Since these studies are similar, and Staw's article has generated greater interest, it will be reviewed. Staw had Ss engage in a nebulous task which was followed by bogus performance feedback. Ss in groups which were informed that they were high performers, reported high levels of cohesiveness, influence, etc., while Ss in low performing groups reported much lower levels of these qualities. (No performance differences actually existed). The author concludes that people have stereotypes of what characteristics belong with certain levels of performance. Presumably, these stereotypes are reported for a given performance level whether or not the characteristic exists. Clearly, Staw suggests that performance will lead to a particular characterization of supervisors as well. He adds further support to this contention by demonstrating that other Ss, who did not participate in the original experiment, attributed similar characteristics to high performance as did the Ss in the original experiment. Staw attempts to argue that these findings are not totally explainable as demand characteristics (see Orne, 1962) because Ss were not aware of the

hypotheses and the Ss were not voluntary participants. These arguments are not very convincing. Ss placed in an ambiguous task situation with no clear perception of their own performance are given random positive or negative feedback. They then filled out questionnaires about their group activities. It seems unlikely that the author could have gotten any other results. (The responses of Ss seem overly determined). A stronger attributional case might have been made if differences in perceptions of the group activities were shown to covary with other characteristics, such as personality types. Finally, the author argues that the responses of Ss demonstrate their stereotype of what should be present in each of the performance conditions. What would Staw have concluded if additional questions had been asked after the experiment, e.g., questions about perceptions of the physical characteristics of the setting, the personality of E, the state of the national economy, or the price of potatoes. It is possible that the responses of the Ss simply verified the author's stereotype which was presented in the questionnaire.

Holistically, we seem not to have gotten very far in resolving the controversy. The support for the behavior-performance linkage seems somewhat stronger than the performance-behavior linkage, however, neither side has demonstrated convincing evidence.

To begin sorting out the nature of this linkage, a longitudinal study was conducted examining the relationships between unit members and supervisors. Subjects had no prior working relationship and only became aware of their tasks after they had been formed into

groups. Based upon earlier work by Jacobs (1971) and Graen (1976) we suspected that the causal linkage between leader behavior and performance might well depend upon the perceptions of interdependence and instrumentality in the work relationship. For this reason, both leaders and members provided information regarding performance and the state of the relationships.

In total 51 Ss from two sections of an undergraduate organizational behavior class participated in the study. Divided into 11 groups of 3 or 4 members and one leader, the Ss performed activities counting towards their group grade for the semester. Periodically, in three intervals of five weeks, attitudinal and perceptual information was collected from all Ss. In each 10-15 minute administration, group members were asked to report on various aspects of their work and working relationship with their leader. Leaders reported similar information about unit members. Between the administrations feedback was given to the leaders and group members on their task performance (objective tests, small case studies, etc.). For purposes of testing the leader behavior-performance hypothesis, the following measures were available: a) member ratings of their relationships with leaders and their contributions toward the group effort; b) leader ratings of their relationships with members and the members' group effort contribution; and c) scores on task performance. The relationship between leaders and members were measured by a modified version of the Vertical Dyadic Linkage instrument (Graen and Cashman, 1975). A seven-item instrument, developed by the authors, assessed

contributions toward group performance. Items, scored from 1 to 5 with behavioral anchors at the two extremes and the midpoint, tapped several dimensions of quantity and quality of individual effort for the group. Because of the high intercorrelations of these items, they were summed to form an overall performance measure. This instrument was administered only at T1 and T3. Task performance scores were average results of tasks completed between the questionnaire administrations.

The results of this study indicate that group members view the behaviors of their leaders to be quite stable over time and not caused by their own contribution to the group task. As shown in Table 1, group members report highly stable perceptions of their relationships with leaders across all time periods ($p < .01$). Further, their view of their contribution to the group task was relatively stable over time ($p < .05$). At the first measurement period group members perception of their relationship with leader was not related to their performance rating, while at the last time period these measures were significantly related ($p < .01$). As shown in Table 1, the causal question was quite unclear. No significant relationships were found between the VDL measure at T1 and performance at T3 or the reverse. Since contribution to unit performance was not measured at T2, no causal link can be established here, however, the rating by members of their relationship at T2 was significantly related to their performance rating at T3 (.40, $p < .01$). No causal relationships were found with the objective measure of performance.

The analysis of the leaders' perspectives is shown in Table 2. From this view, causal ordering is much clearer. Performance and the relationship variable are significantly related at both measurement periods ($p < .01$). For leaders, however, the relationship at T1 does not predict their performance rating at T3. But the performance rating at T1 predicts their perception of the relationship at T3 ($p < .01$). The T2 relationship measure however was reliably related to member performance ratings at T3 ($p < .01$). Again, there was no causal ordering of the objective measures of performance and the relationship variable from the leaders perspective.

Taken together these results indicate that the controversy may actually have two answers. First, it appears as though members, at least initially may perceive behaviors in a dyadic relationship to be independent of performance contributions. Perhaps, this occurs because at the earliest stages of the developmental process, the instrumentalities of the behaviors are quite ambiguous, and members feel relatively little commitment to the total group performance. Over time, the behavioral cues from leaders come to link performance to the interpersonal relationship between the parties in the dyad. From the perspective of the unit members, the relationship develops as other social relationships but later the relationship behaviors become linked to performance.

Second, leaders appear to perceive performance variations as important from the very beginning. Their assessments of member performance are strong predictors of future relationship behaviors.

Since leaders have responsibility for their units, early estimates of member contributions provide the cues for appropriate behavior in the developing relationship. Over time performance and behavior become inextricably intertwined.

These results suggest that the controversy is likely to be clarified only if we restrict our efforts to situations in which leader-member relationships are still in the process of development. Finally, these results suggest that the study of attributional processes may well be the key to unlocking this early process. If both parties in the relationship make behavioral decisions in the early stages of a relationship, they probably do so based upon extremely limited information. The limited information probably becomes linked to other informational categories through various attributions. Discovering this pattern may be a major step toward solving the controversy.

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Table 1

Path-Correlations Between Vertical Dyad Linkage (VDL) and Performance Measures (PERF): Subordinate Perceptions

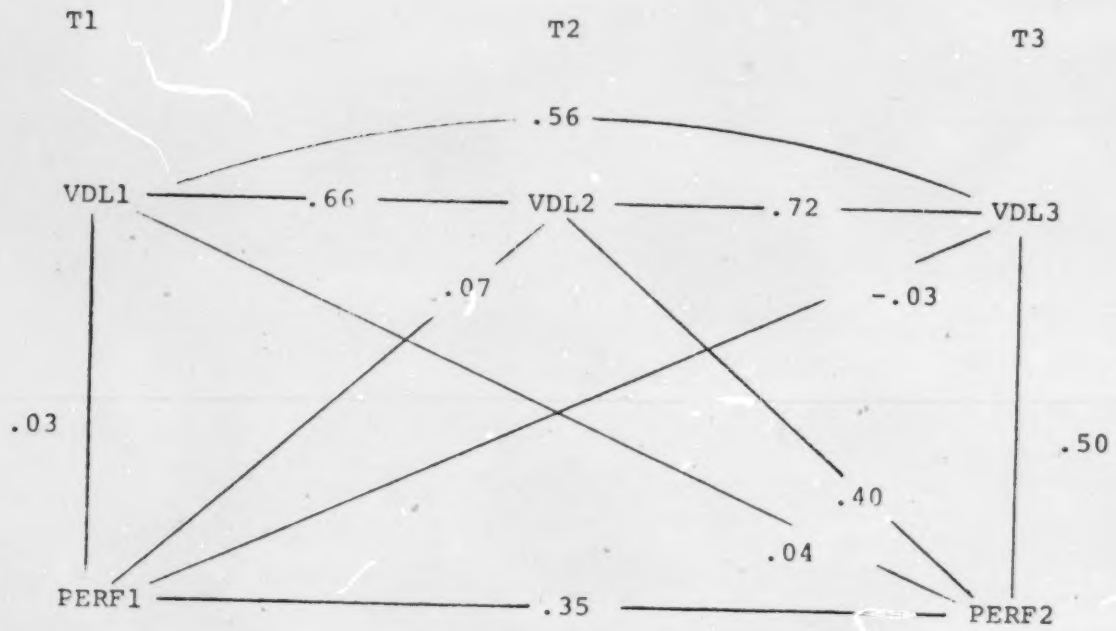

Table 2

Path-Correlations Between Vertical Dyad Linkage (VDL) and Performance Measures (PERF): Leader Perceptions